United States Environmental Protection Agency

AIR POLLUTION CONTROL TECHNOLOGY

BIG WEST OF CALIFORNIA CLEAN FUELS PROJECT PROPOSED CLEAN AIR ACT PERMIT

The proposed PSD permit for the Big West of California Clean Fuels Project would regulate emissions of nitrogen oxides (NO_x), sulfur dioxide (SO_2), carbon monoxide (CO), and particulate matter (PM). Emissions of these pollutants must be reduced by application of the Best Available Control Technology (BACT). The following table summarizes the "Best Available Control Technology" requirements in the proposed permit.

Equipment	Nitrogen Oxides (NOx)	Carbon Monoxide (CO)	Sulfur Dioxide (SO2)	Particulate Matter (PM)
FCCU	• Selective Catalytic Reduction • Low NOx regenerator design	• Good combustion practices • Full burn design	• Sulfur treatment of fuel • SO_2-reducing catalyst	Pall Filter
SWAATS	No NOx emissions expected	• Good combustion practices • 3-phase separator for sour water treatment	Wet scrubber	No PM emissions expected
Large Heaters	• Selective Catalytic Reduction • Low NOx burners	• Good combustion practices • Clean burning fuel	Sulfur treatment of fuel	• Good combustion practices • Clean burning fuel
Small Heaters	Ultra Low NOx burners	• Good combustion practices • Clean burning fuel	Sulfur treatment of fuel	• Good combustion practices • Clean burning fuel
Cooling Towers	No NOx emissions expected	No CO emissions expected	No SO2 emissions expected	• Limit on total dissolved solids • High efficiency drift eliminators
Emergency Diesel Engines	• Use of Tier 3 certified engines, if available at time of permit issuance • Use of Tier 2 certified engines, if Tier 3 engines are not available at time of permit issuance			
Flare	• Flare gas recovery system (to divert gas back to the refinery and minimize gas flared) • Recovery compressors with redundant and excess capacity • Routine use prohibited • Aggressive sulfur treatment of the fuel to minimize sulfur emissions		• Root cause analysis for flaring events to prevent and reduce flaring due to similar causes • Good design and engineering practices (including smokeless operation) • Flare minimization plan	

Please see the Statement of Basis/Ambient Air Quality Impact Report for equipment descriptions, emission limits, and for more information on the air pollution control technology required by the permit.
This report and the draft permit are available at:
http://www.epa.gov/region09/air/permit/r9-permits-issued.html

December 2007